



Marine & Offshore

Certificate number: 56686/A2 BV

File number: AP4892

Product code: 3953H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

www.veristar.com

TYPE APPROVAL CERTIFICATE

This certificate is issued to

ENDRESS+HAUSER CONDUCTA GmbH+Co.KG

Gerlingen - GERMANY

for the type of product

SENSORS / DETECTORS / ANALYSERS

Analysis sensors

CPS11D, CPS12D, CPF81D, CLS21D, CLS50D, CLS82D, CUS50D, CUS52D,
CCS50D, CCS51D, CCS55D, COS81D,
CPS11E, CPS12E, CLS21E, CPF81E

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

EC Code: 21

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 07 May 2025

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 28 Feb 2024,

Dirk Hoepfner

This certificate was created electronically and is valid without signature



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

The electronic version is available at: <http://www.veristarnb.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=crb3mwyekb>

BV Mod. Ad.E 530 June 2017

This certificate consists of 4 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

Sensors for liquid analysis.

CPS11D: pH electrode with digital Memosens technology
CPS12D: ORP electrode with Memosens technology
CPF81D: pH/ORP electrode with digital Memosens technology
CLS21D: Conductivity sensor with digital Memosens technology
CLS50D: Inductive conductivity sensor digital Memosens technology
CLS82D: Hygienic conductivity sensor with digital Memosens technology
CUS50D: Absorption sensor for turbidity measurements
CUS52D: Inline and immersion sensor for turbidity measurements
CCS50D: Chlorine dioxide sensor with digital Memosens technology
CCS51D: Free chlorine sensor with digital Memosens technology
CCS55D: Free bromine sensor with digital Memosens technology
COS81D: Optical sensor for measuring oxygen
CPS11E: pH sensor with digital Memosens technology
CPS12E: ORP sensor with digital Memosens technology
CLS21E: Conductivity sensor with digital Memosens technology
CPF81E: pH sensor with digital Memosens technology

Variants:

Type: CPS11D-**a bb c d**

a = Version : 7

bb = Application range: AA, AS

c = Shaft length: 2

d = Approval: C, 1, G, K, V

Type: CPS12D-**a bb c d**

a = Version : 7

bb = Measuring surface: NA, PA

c = Shaft length: 2

d = Approval: C, G, K, V, 1

Type: CPF81D-**a bb c d**

a = Version : 7

bb = Application range: LH, NN

c = Insertion length: 1, 3

d = Approval: O, 1

Type: CLS21D-**a bb c**

a = Measuring range: C

bb = Process connection: 1E, 1N

c = Approval: C, G, K, O, V, 1

Type: CLS50D-**aa b c d e**

aa = Approval: AA, BA, BV, C2, FB, GB, GR, IA, NA

b = Process connection: 1, 2

c = Sensor-, Seal-; Adapter material: B, C, D

d = Cable length: 1, 2, 3

e = Cable connection: 1, 2

Type: CLS82D-**aa bb c**

aa = Approval: AA, BA, C2, FB, GC, GR, IA, NA

bb = Process connection: GA, HA, PG, PM

c = Sensor material: A

Type: CUS50D-**aa b c d e f g**

aa = Approval: AA, GR

b = Measuring range: 2

c = Process connection: A

d = Adaption cable: A, B

e = Cable length: 2, 3, 4, 7, 8

f = Sensor material: A, B

g = Seal material: 1

Type: CUS52D-**aa b c d e + ff**

aa = Approval: ** (two letters)

b = Measuring method: 1

c = Process connection: A, B, C, D, H

d = Adaption cable: A, B

e = Cable length: 2, 3, 4, 7, 8

ff = Additional approval: LH, and other additional marks

Type: CCS50D-**aa bb cc**

aa = Approval: AA, GR, CD

bb = Application: 11

cc = Measuring range: AD, BF, CJ

Type: CCS51D-**aa bb cc**

aa = Approval: AA, GR, CD

bb = Application: 11

cc = Measuring range: AD, BF, CJ

Type: CCS55D-**aa bb cc**

aa = Approval: AA, GR, CD

bb = Application: 31

cc = Measuring range: AD, BF, CJ

Type: COS81D-**aa bb c d e f**

aa = Approval: AA, BA, C3, GC, GR, IA, NA

bb = Diameter, process connection; length: A2, A4

c = Type optical cap: C, U

d = Material, Sensorshaft; sensorcap: B

e = Material O-ring: 1, 3

f = Material process sealing: 1

Type: CPS11E-**aa b c dd e + ff**

aa = Approval: ** (two letters)

b = Version : 7

c = Application range: A, B, F

dd = Reference system: AA, AS, TA

e = Shaft length: 2

ff = Additional approval: LH, and other additional marks

Type: CPS12E-**aa b c dd e + ff**

aa = Approval: ** (two letters)

b = Version : 7

c = Application range: G, P

dd = Reference system: AA

e = Shaft length: 2

ff = Additional approval: LH, and other additional marks

Type: CLS21E-**aa bb cc + dd**

aa = Approval: ** (two letters)

bb = Process connection: GA, HA

cc = Material: 11

dd = Additional approval: LH, and other additional marks

Type: CPF81E-**aa b c dd e + ff**

aa = Approval: ** (two letters)

b = Version : 5

c = Application range: L, N

dd = Reference system: AD

e = Insertion length: 1, 2, 3

ff = Additional approval: LH, and
other additional marks

2. DOCUMENTS AND DRAWINGS :

- TI367C/07/en/05.05; TI00085C/07/EN/15.18; TI01188C/07/EN/04.17; TI01423C/07/EN/01.18; TI01491C/07/EN/01.19
- BVS 12 ATEX E 048 X dated 2014-01-09; BVS 04 ATEX E 121 X dated 2018-10-04

For A1 version:

- TI00028C/07/EN/15.20; TI00182C/07/EN/19.22-00; TI00191C/07/EN/15.20; TI01201C/07/EN/03.20;
TI01353C/07/EN/02.19; TI01395C/07/EN/04.20

- TI01493C/07/EN/01.20; TI01494C/07/EN/01.20; TI01528C/07/EN/01.20; TI01594C/07/EN/01.21; TI01136C/07/EN/06.20
- BVS 19 ATEX E 062 X dated 03.02.2021; TÜV 19 ATEX 8377 X Issue:01 dated 2020-09-09

For A2 version:

- 3201826 rev. D dated 21.04.2022; 3201826 rev. F dated 05.10.2022; 3201830 rev. D dated 21.04.2022;
3201830 rev. F dated 05.10.2022

3. TEST REPORTS :

- Testlab: E182222E1 dated 27.06.2019; U182222E1 dated 11.07.2019; S182222E1 dated 01.03.2019

- Currenta: 19/0390 dated 2019-03-13; 19/0397 dated 2019-03-13; 19/0914 dated 2019-06-17

For A1 version:

- Testlab: E202076E1 dated 20.04.2021; S202076E1 dated 15.03.2021; U202076E1 dated 03.05.2021;
E220601E1 dated 22.06.2022; U220601E1 dated 28.07.2022

For A2 version:

- Testlab: U231610E1 dated 10.11.2023; E23161E1 dated 28.11.2023

4. APPLICATION / LIMITATION :

4.1 - Bureau Veritas Rules for the Classification of Steel Ships

4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**

4.3 - Bureau Veritas Environmental Category, EC Code: 21

4.4 - The installation shall comply with the Manufacturer's recommendation described in the above-referenced documentation.

4.5 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev8.

4.6 - Ex-certification is not covered by this certificate. Applications in hazardous areas are to be approved in each case according to the Rules and Conditions for Safe Use specified in a valid Ex-Certificate issued by a Notified or Recognised Certification Body.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The above mentioned sensors are to be supplied by **Endress + Hauser Conducta GmbH+Co. KG** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **Endress + Hauser Conducta GmbH+Co. KG** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - For information, **Endress + Hauser Conducta GmbH+Co. KG** has declared to Bureau Veritas the following production sites:

Endress + Hauser Conducta GmbH+Co. KG
Landsberger Str. 28
04736 Waldheim
GERMANY

Endress+Hauser Conducta Inc.
4123 East La Palma Avenue, Suite 200
Anaheim, CA 92807
USA

6. MARKING OF PRODUCT :

- Maker's name or trademark

- Equipment type or model identification

- Date of manufacture and/or serial number

- Ex marking, as relevant

7. OTHERS :

7.1 - It is the responsibility of **Endress + Hauser Conducta GmbH+Co. KG** to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N° 56686/A1 BV issued on 03 Mar 2023 by the Society.

*** END OF CERTIFICATE ***